



# MATERIAL SAFETY DATA SHEET

FILE NO.: T2V1  
MSDS DATE: 11/30/2009  
MSDS No.: T2113009

**Product: T2**

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** T2 Threadlocker  
**PRODUCT CODES:** T2ML10, T2ML50, T2ML250  
**COMPANY NAME:** SmartAdhesives LLC  
**ADDRESS:** San Francisco, CA 94129

**EMERGENCY PHONE:** Chemtrec: 1-800-424-9300

**PRODUCT USE:** Anaerobic adhesive and sealant; Industrial use  
**ISSUE DATE:** 11-30-2009

## SECTION 2: INFORMATION ON INGREDIENTS

<b>HAZARDOUS INGREDIENT:</b>	<b>C.A.S. No.</b>	<b>% by Wt.</b>
Triethylene Glycol Dimethacrylate Esters	109-16-0	5-10%
Trimethylolpropane Trimethacrylate	3290-92-4	5-10%
Saccharin	81-07-2	<2%
Cumene Hydroperoxide	80-15-9	<1%

## SECTION 3: HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Normal physical form - liquid

### IMMEDIATE HEALTH AND ENVIRONMENTAL HAZARDS

May cause skin irritation. May cause skin sensitization. Polymerization reaction may be caused by high temperature, inhibitor depletion, accidental impurities and exposure to radiation and oxidizers. Rapid polymerization generates heat and/or pressure.

### POTENTIAL HEALTH EFFECTS

**EYE CONTACT:** Slight eye irritant. Symptoms may include tearing, blinking, redness.

**SKIN CONTACT:** Skin irritant. May cause skin sensitization.

**INHALATION:** May cause respiratory tract irritation. Symptoms may include coughing, mucous production, and shortness of breath.

**INGESTION:** Not expected to be ingested under normal conditions of use. May be harmful if swallowed.

### MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

May induce an allergic or sensitization reaction.

Acute Toxicity: Symptoms of overexposure include dizziness, headache or nausea.

### POTENTIAL CHRONIC HEALTH EFFECTS

Chronic exposure may result in skin sensitization  
Target organs: bladder, liver, kidneys

### CARCINOGENICITY

Triethylene Glycol Dimethacrylate Esters  
Trimethylolpropane Trimethacrylate  
Saccharin  
Cumene Hydroperoxide

**OSHA:** NO

**OSHA:** NO

**OSHA:** NO

**OSHA:** NO

**NTP:** NO

**NTP:** NO

**NTP:** NO

**NTP:** NO

**IARC:** NO

**IARC:** NO

**IARC:** NO

**IARC:** NO

**SECTION 4: FIRST AID MEASURES**

<b>EYES:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice immediately.
<b>SKIN:</b>	Immediately remove product from skin with dry cloth or towel. Wash skin with soap and plenty of warm water. If symptoms occur, seek medical advice. Wash contaminated clothing prior to reuse.
<b>INGESTION:</b>	Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Never give anything by mouth to an unconscious person.
<b>INHALATION:</b>	Move to fresh air. If symptoms persist, seek medical advice.

**SECTION 5: FIRE FIGHTING MEASURES**

<b>FLAMMABILITY:</b>	May ignite when exposed to open flame.
<b>FLAMMABLE LIMITS UPPER:</b> (% BY VOLUME) <b>LOWER:</b>	not determined not determined
<b>FLASH POINT:</b>	200°F (93°C) (closed cup)
<b>AUTOIGNITION TEMP:</b>	>392°F (200°C)
<b>NFPA HAZARD CLASSIFICATION</b>	
<b>HEALTH: 2</b>	<b>FLAMMABILITY: 1</b> <b>REACTIVITY: 1</b>
<b>HMIS HAZARD CLASSIFICATION</b>	
<b>HEALTH: *2</b>	<b>FLAMMABILITY: 1</b> <b>PHYSICAL HAZARD: 1</b> <b>PROTECTION: D</b>
<b>EXTINGUISHING MEDIA:</b>	Use dry chemical powder for small fire. For large fire, use water spray or carbon dioxide. Use water spray /for to cool containers.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Wear positive pressure, self-contained breathing apparatus and full protective clothing.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS:</b>	High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause polymerization reaction, generating heat and/or pressure. Closed containers may rupture or explode during rapid polymerization.  May undergo rapid exothermic reaction polymerization during certain conditions. Closed containers may rupture or explode during polymerization.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	see Section 10

**SECTION 6: ACCIDENTAL RELEASE MEASURES****ACCIDENTAL RELEASE MEASURES:**

No action shall be taken involving any personal risk or without suitable training. Evacuate untrained and unprotected people from release areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Ventilate area. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

For small spills, absorb with inert material (vermiculite, clay, sand, silica gel, universal binder) and dispose in appropriate waste disposal container. For larger spills, first

extinguish all sources of ignition. Material is combustible. Make sure to first stop spill or leak at source before clean-up. Dike if necessary. Absorb with inert material and place in appropriate waste disposal container. Spilled or release material may polymerize and release heat and/or gases. Dispose of all material in accordance with Federal, State, and local regulations.

**SECTION 7: HANDLING AND STORAGE**

**HANDLING:**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face with soap and water before eating, drinking and smoking.

Avoid contact with eyes and skin. Material is a potential skin sensitizer. Avoid prolonged exposure to vapor or mist. Do not ingest. Do not mix with oxygen-free gas as it renders inhibitor ineffective and makes product susceptible to polymerization. Keep in the original container or an approved alternative made from a compatible material. Prevent contaminating product with foreign material.

**STORAGE:**

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from sources of heat and ignition, and water. Prevent moisture contact and contaminating product with foreign material. Store in accordance with local regulations.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS**

**VENTILATION :**

Use local exhaust ventilation, sufficient in pattern and volume, to maintain vapor concentration below established TLV requirements.

**RESPIRATORY PROTECTION:**

Use NIOSH approved respirator if there is a potential to exceed exposure limits.

**EYE PROTECTION:**

Avoid contact with eyes. Use safety glasses with side shields or indirect vented goggles.

**SKIN PROTECTION:**

Avoid contact with skin. Use nitrile, PVA, or butyl rubber gloves.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:**

Facilities storing or utilizing this material should be equipped with eye wash fountains and safety shower.

**WORK HYGIENIC PRACTICES:**

Remove contaminated clothing and launder before next use. Wash thoroughly after handling.

**EXPOSURE GUIDELINES:**

	<u>Organization</u>	<u>Type</u>	<u>Limit</u>
Cumene Hydroperoxide	AIHA	TWA	1 ppm
	ACGIH (TLV)	TWA	none
	OSHA (PEL)	TWA	none

AIHA: American Industrial Hygiene Association Workplace Env. Exposure Level (WEEL)

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR & APPEARANCE:**

red liquid

**ODOR THRESHOLD:**

slight

**PHYSICAL FORM:**

liquid

**FLAMMABLE LIMITS**

LEL:

not available

UEL:

not available

**BOILING POINT:**

not available

**AUTOIGNITION TEMP:**

not available

**FLASH POINT:**

200°F (93°C)

**VAPOR PRESSURE (mmHg):**

not available

**VAPOR DENSITY (AIR=1):**

not available

**SPECIFIC GRAVITY (H2O=1):**

1.13

**EVAPORATION RATE:**

not available

**SOLUBILITY IN WATER:**

insoluble

**VISCOSITY:**

650 ± 10 cP

**VOLATILE ORGANIC COMPOUNDS (VOC)**

(Pensky-Martens Closed Cup ASTM D 93)

VOC: NA  
 VOC less H2O & Exempt Solvent: NA

pH AS SUPPLIED: not available

**SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** Stable under recommended storage conditions. Hazardous polymerization may occur under the conditions listed below, including loss of inhibitor.

**MATERIALS AND CONDITIONS TO AVOID (STABILITY):**

Product will be unstable at high temperatures, fire conditions, or depletion of inhibitor. Avoid direct sunlight, UV radiation, oxidizing agents, inert gas blanketing, and freezing conditions.

Acids, bases, chlorines, free radical initiators, inert gases, nitrates, oxidizing agents, oxygen scavengers, and reducing agents.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:**

Carbon oxides. Nitrogen oxides. Sulfur oxides. Phosphorous oxides. May emit other toxic fumes under fire conditions.

**HAZARDOUS POLYMERIZATION:** Hazardous polymerization may occur in the event of accidental impurities, exposure to radiation or oxidizers, lack of inhibitor, high temperatures, or when exposed to direct sunlight or heat. Uncontrolled polymerization may cause rapid production of heat and increase in pressure that could result in violent rupture of sealed storage containers.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**TOXICOLOGICAL INFORMATION:**

Triethylene Glycol Dimethacrylate Esters

Acute oral LD50: >4.49 mg/kg (rat)  
 Acute dermal LD50: >2.0 mL/kg (rabbit)  
 Acute inhalation LC50: >2 mg/m<sup>3</sup> (rat)

Trimethylolpropane Trimethacrylate

Acute oral LD50: >6,000 mg/kg (rat)  
 Acute dermal LD50: >16,960 mg/kg (rabbit)  
 Results from a mouse lymphoma test were positive indicating possible mutagenic potential

Saccharin

Acute oral LD50: >17 g/kg (mouse)  
 IARC 3, possibly carcinogenic to humans

Cumene Hydroperoxide

Acute oral LD50: >382 mg/kg (rat)  
 Acute dermal LD50: >500 mg/kg (rabbit)  
 Acute inhalation LC50: >220 ppm (rat)  
 Studies conducted on laboratory animals found this substance to be tumorigenic by RTECS criteria

Chronic Effects:

Chronic exposure of this product may result in skin sensitization.  
 Target organs: Bladder, liver, kidneys.

**SECTION 12: ECOLOGICAL INFORMATION**

**ECOLOGICAL INFORMATION:** Not available.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** Disposal of this product, solutions and any by-products should at all times comply with Federal, State and local regulations. Any material should be disposed of in a RCRA approved waste facility or RCRA approved incinerator. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA HAZARD CLASS: none.

**SECTION 14: TRANSPORT INFORMATION**

**U.S. DEPARTMENT OF TRANSPORTATION (49 CFR)**

PROPER SHIPPING NAME: Not a DOT controlled material

**INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA)**

PROPER SHIPPING NAME: Not subject to IATA regulations

**WATER TRANSPORTATION (IMO/IMDG)**

PROPER SHIPPING NAME: Not subject to IMDG code

**SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS**

**TSCA (Toxic Substance Control Act)**

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**311/312 HAZARD CATEGORIES:**

Chronic: Yes    Reactivity: No    Acute: Yes

**SECTION 313: (Toxic chemicals subject to reporting requirements of that section and 40 CFR part 372 (EPCRA))**

Cumene hydroperoxide	<1% (% by weight)	CAS 80-15-9
Saccharin	<2%	CAS 81-07-2

**CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION, AND LIABILITY ACT):**

Cumene hydroperoxide	10 lbs. reportable quantity
Saccharin	100 lbs. reportable quantity

**STATE REGULATIONS**

California Prop. 65: no products were found

**SECTION 16: OTHER INFORMATION**

**OTHER INFORMATION:**

**HMIS Rating**

Health	*2
Flammability	1
Physical Hazard	1
Protection	D

**NFPA Rating**

Health	2
Flammability	1
Reactivity	1

**PREPARATION INFORMATION:**

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